

ay [Page 7, please amend the paragraphs beginning at line 15 and ending at line 36:]

When a wearer of a filtering face mask 10 exhales, exhaled air passes through the mask body 12 and exhalation valve 14. Comfort is best obtained when a high percentage of the exhaled air passes through exhalation valve 14, as opposed to the filter media of mask body 12. Exhaled air is expelled through valve 14 by having the exhaled air lift flexible flap 24 from valve seat 26. Flexible flap 24 is attached to valve seat 26 at a first stationary portion 28 of flap 24, and the remaining circumferential edge of flexible flap 24 is free to be lifted from valve seat 26 during exhalation. The circumferential edge segment that is associated with the stationary portion 28 remains at rest during an exhalation. As the term is used herein, "flexible" means the flap can deform or bend in the form of a self-supporting arc when secured at one end as a cantilever and viewed from a side elevation (see e.g., FIG. 5). A flap that is not self-supporting will tend to drape towards the ground at about 90 degrees from the horizontal.

As shown in FIGs. 3 and 4, valve seat 26 has a seal ridge 30 that has a seal surface 31 to which the flexible flap 24 makes contact when a fluid is not passing through the valve 14. An orifice 32 is located radially inward to seal ridge 30 and is circumscribed thereby. Orifice 32 can have cross-members 34 that stabilize seal ridge 30 and ultimately valve 14. The cross-members 34 also can prevent flexible flap 24 from inverting into orifice 32 under reverse air flow, for example, during inhalation. When viewed from a side elevation, the surface of the cross-members 34 is slightly recessed beneath (but may be aligned with) seal surface 31 to ensure that the cross members do not lift the flexible flap 24 off seal surface 31 (see FIG. 3).

Page 10, please amend the paragraph beginning at line 3 and ending at line 12:

ay Valve seat 26 preferably is made from a relatively light-weight plastic that is molded into an integral one-piece body. The valve seat can be made by injection molding techniques. The surface 31 of the seal ridge 30 that makes contact with the flexible flap 24 (the contact or seal surface) is preferably fashioned to be substantially uniformly smooth to ensure that a good seal occurs. The contact surface preferably has a width great enough to form a seal with the flexible flap 24 but is not so wide as to allow adhesive forces caused by condensed moisture to significantly make the flexible flap

24 more difficult to open. The width of the contact surface, preferably, is at least 0.2 mm, and preferably is in the range of about 0.25 mm to 0.5 mm.

Page 14, please amend the paragraph beginning at line 33 and ending on page 15 at line 25:

Exhalation valve 14 can be provided with a valve cover to protect the flexible flap 24, and to help prevent the passage of contaminants through the exhalation valve. In FIG. 7, a valve cover 50 is shown which can be secured to exhalation valve 14 by a friction fit to wall 44. Valve cover 50 also can be secured to the exhalation valve 14 by ultrasonic welding, an adhesive, or other suitable means. Valve cover 50 has an opening 52 for the passage of a fluid. Opening 52 preferably is at least the size of orifice 32, and preferably is larger than orifice 32. The opening 52 is placed, preferably, on the valve cover 50 directly in the path of fluid flow 36 so that eddy currents are minimized. In this regard, opening 52 is approximately parallel to the path traced by the free end 38 of flexible flap 24 during its opening and closing. As with the flexible flap 24, the valve cover opening 52 preferably directs fluid flow downwards so as to prevent the fogging of a wearer's eyewear. All of the exhaled air can be directed downwards by providing the valve cover with fluid-impermeable side walls 54. Opening 52 can have cross-members 56 to provide structural support and aesthetics to valve cover 50. A set of ribs 58 can be provided on valve cover 50 for further structural support and aesthetics. Valve cover 50 can have its interior fashioned such that there are female members (not shown) that mate with pins 41 of valve seat 14. Valve cover 50 also can have a surface (not shown) that holds flexible flap 24 against flap-retaining surface 40. Valve cover 50 preferably has fluid impermeable ceiling 60 that increases in height in the direction of the flexible flap from the fixed end to the free end. The interior of the ceiling 60 can be provided with a ribbed or coarse pattern or a release surface to prevent the free end of the flexible flap from adhering to the ceiling 60 when moisture is present on the ceiling or the flexible flap. The valve cover design 50 is fully shown in U.S. Design Patent Application 29/000,382. Another valve cover that also may be suitable for use on a face mask of this invention is shown in Design Patent Application 29/000,384. The disclosures of these applications are incorporated here by reference.

Page 20, please amend the paragraph beginning at line 24 and ending at line 33:

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The exhalation valve of Example 1 was mounted to a 3M 8810 filtering face mask such that the exhalation valve was positioned on the mask body directly opposite to where a wearer's mouth would be when the mask is worn. The airflow through the nozzle was increased to approximately 80 l/min to provide an airflow velocity of 8.3 meters per second (m/s). At this velocity, zero pressure drop was achieved inside the face mask. An ordinary person will exhale at moderate to heavy work rates at an approximate air velocity of about 5 to 13 m/s depending on the opening area of the mouth. Negative and relatively low pressures can be provided in a face mask of this invention over a large portion of this range of air velocity.



Page 22, please replace Table 2:

<i>Examples</i>	<i>Volume Flow (liters/minute)</i>	<i>Pressure Drop (Pa) Nozzle Area: 18.1 cm²</i>	<i>Pressure Drop (Pa) Nozzle Area: 2.26 cm²</i>	<i>Pressure Drop (Pa) Nozzle Area: 0.96 cm²</i>	<i>% Total Flow Nozzle Area: 18.1 cm²</i>	<i>% Total Flow Nozzle Area: 2.26 cm²</i>	<i>% Total Flow Nozzle Area: 0.96 cm²</i>
8	12	9.02	8.92	8.92	1	2	2
9	24	15.09	14.21	11.17	19	24	39
10	48	18.62	14.99	4.31	30	60	87
11	60	20.48	15.09	-1.76	56	68	102
12	72	22.34	14.80	-7.55	61	73	112
13	80	24.01	14.41	-12.94	62	77	119